National Institute of Standards and Technology

NVLAP®

National Voluntary Laboratory Accreditation Program

ISO/IEC 17025:1999
ISO 9002:1994

Scope of Accreditation

CALIBRATION LABORATORIES **NVLAP LAB CODE 200491-0**

RUSKA CALIBRATION LABORATORY
10311 Westpark Drive
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URL: http://www.ruska.com

MECHANICAL

NVLAP Code: 20/M08
Mass - Calibration in support of deadweight pressure measurements

Range	*Best Uncertainty (±)*[note1]	*Remarks*
17.13 kg	85.66 mg	
16.80 kg	84.00 mg	
11.81 kg	59.05 mg	
5 kg	25.0 mg	
3 kg	15.0 mg	
2.36 kg	11.8 mg	
2 kg	10.0 mg	
1 kg	5.0 mg	
500 g	2.5 mg	
300 g	1.5 mg	

December 31, 2003

Effective through

David F. Alderman

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200 g	1.0 mg
100 g	0.5 mg
50 g	0.5 mg
30 g	0.5 mg
20 g	0.5 mg
10 g	0.5 mg
5 g	0.5 mg
3 g	0.5 mg
2 g	0.5 mg
1 g	0.5 mg
500 mg	0.5 mg
300 mg	0.5 mg
200 mg	0.5 mg
100 mg	0.5 mg
50 mg	0.5 mg
30 mg	0.5 mg
20 mg	0.5 mg
10 mg	0.5 mg

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5 mg	0.5 mg
3 mg	0.5 mg
2 mg	0.5 mg
1 mg	0.5 mg

THERMODYNAMICS

NVLAP Code: 20/T05
Pressure

Pneumatic Pressure (Gauge Mode) Direct Pressure Comparison - Ultimate Capability

Range	*Best Uncertainty (±) of reading*[note 1]	*Remarks*
1.38 kPa to 345 kPa	7×10^{-6} but not less than 0.07 Pa	For Absolute Mode uncertainties increase by 0.133 Pa added in quadrature
11.72 kPa to 1400 kPa	7×10^{-6} but not less than 0.28 Pa	
14 kPa to 7 MPa	7.5×10^{-6} but not less than 2.8 Pa	
700 kPA to 21 MPa	$8.5 \times 10^{-6} + 1.7 \times 10^{-7}$ per MPa	

Pneumatic Pressure (Differential Mode) - Ultimate Capability

-16 kPa to 16 kPa	1.10×10^{-5} + 0.034 Pa added in quadrature

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Pneumatic Pressure (Gauge Mode) Direct Pressure Comparison - General Capability

20 Pa to 16 kPa	1.5×10^{-4} but not less than 0.1 Pa	For Absolute Mode uncertainties increase by 0.133 Pa added in quadrature
750 Pa to 211 kPa	1.5×10^{-4}	
1.38 kPa to 345 kPa	1.0×10^{-5} but not less than 0.07 Pa	
11.72 kPa to 1400 kPA	1.0×10^{-5} but not less than 0.28 Pa	
14 kPA to 7 MPa	1.1×10^{-5} but not less than 2.8 Pa	
700 kPa to 21 MPa	$1.1 \times 10^{-5} + 1.9 \times 10^{-7}$ per MPa	
1170 kPa to 104 MPa	3.5×10^{-5}	

Pneumatic Pressure (Absolute Mode) - General Capabilities

0 Pa to 133 Pa	10% but not less than 1.33 Pa

Pneumatic Pressure (Differential Mode) - General Capabilities

-16 kPa to +16 kPa	1.5×10^{-4} but not less than 0.1 Pa

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RUSKA CALIBRATION LABORATORY

Hydraulic Pressure (Gauge Mode) - General Capabilities

50 kPa to 5 MPa	2.5×10^{-5} but not less than 10 Pa
69 kPa to 6.9 MPa	2.5×10^{-5} but not less than 13.8 Pa
500 kPa to 138 MPa	3.5×10^{-5}
14 MPa to 276 MPa	7.5×10^{-5}
6.2 MPa to 500 MPa	1.0×10^{-4}

Hydraulic Pressure Derived Effective Area - General Capability

50 kPa to 6.9 MPa	2.31×10^{-5}
500 kPa to 133 MPa	3.34×10^{-5}
14 MPa to 276 MPa	7.29×10^{-5}
6.2 MPa to 500 MPa	9.80×10^{-5}

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Pneumatic Pressure Derived Effective Area - General Capability

1.38 kPa to 345 kPa	8.8×10^{-6}
11.72 kPa to 1400 kPa	8.3×10^{-6}
14 kPa to 7 MPa	$1.0 \times 10^{-5} + 2.4 \times 10^{-7}$ per MPa added in quandrature
700 kPa to 21 MPa	$1.0 \times 10^{-5} + 4.8 \times 10^{-7}$ per MPa added in quandrature
1170 kPa to 104 MPa	3.37×10^{-5}

NVLAP Code: 20/T07
Resistance Thermometry

Range	*Best Uncertainty (±)*[note 1]	*Remarks*
0-100°C	0.03°C	

1. Represents an expanded uncertainty using a coverage factor, k=2.

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